

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figs. 12-16. These sheets, which include Figs. 12-16, replace the original sheets including Figs. 12-16. Figs. 12-16 have been labeled “conventional art” in order to address the drawings objection.

Attachment: 3 Replacement Sheets

REMARKS

This is in response to the Office Action dated June 29, 2007.

Drawings and Formality Objections

Figs. 12-16 have been labeled "conventional art" in order to address the drawing objection. Moreover, the formality objections to claims 7 and 10 have been addressed and overcome by the changes to those claims herein.

IDS filed June 1, 2006

With respect to the IDS filed June 1, 2006, the two KR references listed on the PTO-1449 should be considered because each has an English counterpart which has been cited/submitted. KR '122 has an English counterpart (US 6,034,748) which was also cited and considered in that IDS, and KR '860 has an English counterpart (US 6,310,667) which was also submitted and cited in that IDS. Thus, because English counterparts of each of the two KR references have been submitted, it is respectfully submitted that the two KR references cited in the June 1, 2006 IDS should be considered. It is respectfully requested that the Examiner provide the undersigned with an updated PTO-1449 from the IDS filed June 1, 2006 where all references listed thereon are initialed.

Art Rejections

Claim 1 stands rejected under Section 103(a) as being allegedly unpatentable over alleged Admitted Prior Art (APA) in view of Lee. This rejection is respectfully traversed.

The alleged APA discloses a drain electrode coated with ITO. The Examiner cites to Lee and apparently contends that it would have been obvious to have replaced the ITO with IZO in order to meet claim 1. However, Lee does not teach or suggest using IZO to coat a drain electrode. Lee uses Cr or Mo for the gate and data lines. Moreover, Lee teaches to use ITO or

IZO for the transparent pixel electrode only “if they are formed separately from the drain electrode” (see Lee at [0072]). Thus, Lee teaches that IZO should not be used in connection with the drain electrode, thereby teaching directly away from the invention of claim 1 and the alleged modification made by the Examiner. There is nothing in the art of record which teaches or suggests coating a metal drain electrode with IZO as alleged in the Office Action. Hindsight is not permitted.

According to example non-limiting embodiments of the present invention, as shown in Figure 3 for example, the drain electrode 26 includes a laminated structure of a metal film (e.g. Mo) 42 and a protective film (e.g. IZO) 44. In particular, the etching rate of the metal film 42 may be almost equal to that of the protective film 44; therefore, the metal film 42 and the protective film 44 may be formed by simultaneously etching the metal film 42 and the protective film 44. Moreover, the etching rate of the protective film 44 may be almost zero with respect to an etching (e.g., second etching) for forming the contact hold 50 in the insulation film 52 (e.g., see page 23, lines 7-23 and page 27, line 1, page 28, line 18). Therefore, a part of the drain electrode is not removed by the second etching in example embodiments of this invention.

With reference to Figure 7A of Lee, Lee merely discloses that the pixel electrodes 182, 183 and the connecting line 181 can be a transparent conductive material made of ITO or IZO if they are formed separately from the drain electrode 163 (see [0072] of Lee). However, Lee does not teach or suggest that the drain electrode can be a transparent conductive material made of ITO or IZO. Accordingly, in the case where the pixel electrode and the drain electrode are separately formed, Lee does not teach or suggest that the drain electrode can be a transparent conductive material comprising ITO or IZO.

In addition, although Lee may disclose that the pixel electrodes 182, 183 may be of ITO or IZO, this does not constitute as a sufficient basis to support the Examiner's hindsight conclusion that "ITO and IZO are interchangeable" for any application. This is simply not true. For example, the present application clearly demonstrates that it is significantly advantageous to utilize IZO instead of ITO as part of the drain electrode (see page 12, lines 7-9 and page 23, lines 7-33). Therefore, it is improper to apply the interchangeability of ITO and IZO as a general rule that is applicable to all situations. This is clearly not the case.

Furthermore, the Examiner alleges that it would have been obvious to modify the protective film made of ITO as disclosed in the background so as to be replaced with IZO "to function as a better transparent conductive oxide as taught by Lee". This allegation is without merit, because nowhere does Lee disclose or suggest that using IZO instead of ITO would result in a better transparent conductive oxide. Therefore, one skilled in the art would not have been motivated to modify the protective film made of ITO so as to be replaced with IZO without any objective reason to do so.

It is impermissible to engage in hindsight reconstruction of the claimed invention, using applicants' disclosed structure as a template and selecting elements from references to fill in the gaps. *In re Gorman*, 18 USPQ2d 1885 (Fed. Cir. 1991).

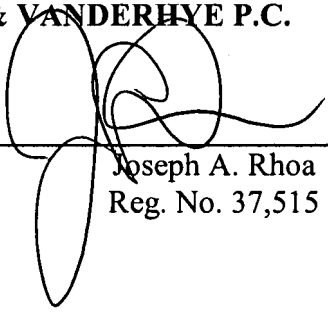
If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

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Respectfully submitted,

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